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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/773,750	02/02/2001	Yasuki Fujiwara	TPP 31367	6910

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Thomas P. Pavelko, Esquire
STEVENS, DAVIS, MILLER & MOSHER, L.L.P.
1615 L Street, N.W., Suite 850
Washington, DC 20036

EXAMINER

CHOI, LING SIU

ART UNIT PAPER NUMBER

1713

DATE MAILED: 10/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/773,750

Applicant(s)
Fujiwara et al.

Examiner
Ling-Siu Choi

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1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above, claim(s) 23 and 24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

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DETAILED ACTION

Election/Restriction

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-22, drawn to a process to prepare a catalyst, classified in class 502, subclass 127.
 - II. Claims 23-24, drawn to a process to prepare a polymer, classified in class 526, subclass 142.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions relate a process to prepare a catalyst and a process to prepare a polymer.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

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4. During a telephone conversation with Mr. Thomas P. Pavelko on December 6, 2001, a provisional election was made without traverse to prosecute the invention of Group I, claims 1-22. Affirmation of this election must be made by applicant in replying to this Office action. Claims 23-24 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Objections

6. Claims 1-22 are objected to because of the following informalities: (a) claims 11-18, lines 1-2, "component (1)" is suggested to be changed to --component (2)-- for the consistence with claim 10 and (b) claim 1, line 8; claim 2, line 7; claim 3, line 8; claim 4, line 12; claim 5, line 16; claim 6, line 3; claim 10, line 9, claim 11, line 7; claim 12, line 8; claim 13, line 12; claim 14, line 16; claim 15, line 3; claim 19, line 8; claim 21, line 8, "14 group element" is suggested to be

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changed to --Group 14 element--, and (c) claim 6, line 6; claim 15, line 6, "14 group" is suggested to be changed to --Group 14--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

8. Claims [1-3, 6-9, 19-20] and [10-12, 15-18, 21-22] are rejected under 35 U.S.C. 102(e) as being anticipated by Satoh et al. (US 6,187,883 B1).

The present invention relates to a process to prepare a solid catalyst component (1) for olefin polymerization, comprising

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1	<i>reducing $R^2[O-Ti(X^2)_2]_aX^2$ (a is a number of 1 to 20)</i>	<i>with an organomagnesium compound in the presence of an organosilicon compound having an Si-O bond [and an ester (claim 10)] to obtain a solid product</i>	
2	<i>contacting the solid product with</i>	<i>a halogen compound of the Group 14 element,</i>	
		<i>at least one selected from</i>	<i>electron donor compound (E1)</i>
		<i>organic acid halide, a compound having a Ti-halogen bond to obtain the solid catalyst component (1)</i>	

(summary of claim 1)

Satoh et al. disclose a catalyst component obtained by a process comprising reducing a titanium compound with an organomagnesium compound in the presence of an organosilicon compound and an ester to obtain a solid product, then treating the solid product with (a) a mixture of titanium tetrachloride and an ether, (b) an organic acid halide, and (c) a mixture of titanium tetrachloride and an ether optionally containing an ester (abstract; claim 1). Satoh et al. further disclose that a halogenated hydrocarbon such as dichloroethane or trichloroethylene is preferably used as a solvent for mixtures (a) or (b) (col. 8, lines 54-67). Satoh et al. further disclose a catalyst comprising the catalyst component, an organoaluminum compound, and an electron-donor compound (claim 7). Thus, the present claims are anticipated by the disclosure of Satoh et al..

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9. Claims [1-3, 6-9, 19-20] and [10-12, 15-18, 21-22] are rejected under 35 U.S.C. 102(b) as being anticipated by Sato et al. (JP 10-212319-A).

Sato et al. disclose a catalyst comprising (A) a catalyst component, (B) an organoaluminum, and (C) an electron donor, wherein the catalyst component is obtained by the steps of (a) reducing an titanium compound of $Ti(OR)_4$ by an organic magnesium compound in the presence of an organosilicon compound having Si-O bond and an ester to obtain a solid product, (b) treating the solid product with a mixture of an ether compound and titanium tetrachloride, then an organic acid halide compound, and finally a mixture of an ether, titanium tetrachloride, and an ether compound.(claim 1). Thus, the present claims are anticipated by the disclosure of Sato et al..

Claim Rejections - 35 USC § 103

10. **The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:**

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims [4-5] and [13-14] are rejected under 35 U.S.C. 103(a) as being unpatentable over Satoh et al. (US 6,187,883 B1) or Sato et al. (JP 10-212319-A).

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The disclosure of Satoh et al or Sato et al. is adequately set forth in Paragraph 8 or 9 and is incorporated herein by reference.

The difference between the present claims and the disclosure of Satoh et al. or Sato et al. is the requirement of extra steps to prepare the catalyst component.

It is noted that for claims 4 and 13 the extra steps comprising two-times contact with a mixture of the compound having Ti-halogen bond and an ether; for claims 5 and 14 the extra steps comprising the contact with a mixture of the halogen compound of the Group 14 element and an ether, followed by the contact with a mixture of the compound having a Ti-halogen bond and an ether. Since these extra steps just repeat the previous steps, such extra steps are reasonably to be considered just to enhance the contact in the absence of unexpected results. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to repeat the steps in the disclosure of Satoh et al. or Sato et al. and thereby obtain the present invention.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is (703)305-0887.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reach on (703)308-2450.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703)308-2351.



Ling -Siu Choi

July 27, 2003